WHAT PRODUCES HIGH POTENTIAL COLLECTIONS FROM THIRD-PARTY INSURANCE?

A COMPARISON OF VISNs USING THE FY 1998 MODEL FOR MCCR THIRD-PARTY PROJECTIONS

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For the last two years, the Center for Health Quality, Outcomes and Economic Research (CHQOER) has estimated potential collections from veterans' private third party insurance for care provided for non-service connected conditions. The Veterans Health Administration's (VHA's) Office of Medical Care Cost Recovery (MCCR) has used these estimates in setting budget goals for the 22 Veterans Integrated Service Networks (VISNs).

Compared to actual collections, some of the VISN goals appear too high; others, too low. This report addresses three questions:

1. What factors does the MCCR/CHQOER model account for?
2. By what criteria may a calculated potential collection amount be considered high?
3. How does each VISN rank on each of these criteria and on the factors in the model that determine the amount of potential collections?

Total potential collections for a VISN differ by as much as 100% from the median value for all VISNs. Even when the potential collections are expressed per resident veteran or per user of the VHA system, VISNs differ by as much as 50% from the median value for all VISNs four factors are the principal contributors to these differences:

1) Breadth of utilization (number of VA users per veteran population)
2) Intensity of utilization (discharges, days or visits per user), especially days per user
3) Rate of non-HMO insurance coverage in areas served by the VISN
4) Average billing rate that reflects the mix between inpatient and outpatient services

No one VISN is high on all of these measures, but VISNs 21 and 22 are low on all of them (below the median in contributions to potential collections). Except for VISNs 3 and 17, differences among VISNs in collection rates and in

the proportion of veterans with some insurance are not very important in generating differences in potential collections.

This report is limited to an examination of data already compiled and used in the estimation of potential collections for Fiscal Year 1998 (FY98). The numbers are taken from the most recent full-system, baseline forecast we made of FY98 goals. That forecast extrapolated 1st-quarter FY98 results to the full year. The forecast used actual 1998 prices. The HMO rate for 1998 was projected from the 1995 rate by a linear trend, for 3 years, of the average annual growth rate from 1990-1994. Veterans' insured rates are blended rates for 65+ and are under 65, based on data from the 1992 survey of veterans. The outpatient rate of $229 per visit was applied, and we assumed 20 % collections for Medicare outpatient visits. Collection rates are the blend of 1997 MCCR goals, percentages and the rates calculated from FY1995 data collected for the RATE study. Specific collection rates by the VISN are applied for general medical and surgical bed sections and for outpatient visits.

OUTLINE OF THE MCCR/CHQOER MODEL

Potential collections should be related to the billable value of work for non-service-connected conditions that is performed by the VHA for veterans who are insured by third parties. The only direct information showing which are insured, by which insurers and for what services is collected and maintained by individual stations. That information is not suitable for MCCR staff planning. To the extent that the information is inaccurate or incomplete, it may understate potential collections. To the degree that accuracy or completeness varies among stations and across VISNs, using only the billing and collection data compiled by the stations, or only the amounts of past collections by station, would produce inequitable projections of potential future collections. Stations that have been especially conscientious or efficient in determining who is insured would, in effect, be penalized by being held to maintain the excellence they have already shown. In contrast, stations that have put a lower priority on collections or have been less effective in identifying potential collections or following through in realizing potential

collections would never be pushed to rise to the level of good performers.

To overcome these problems of possible incompleteness, inaccuracy, and variation in quality of billing data among stations, the MCCR/CHQOER model attempts to estimate potential collections by incorporating objective measures of workload, billable value, and the prevalence of insurance. Measurers of workload are taken from records of inpatient and outpatient services that are maintained at Austin, Texas. The prevalence of insurance is calculated by taking account of the veteran's age, service-connectedness of the condition treated, whether the veteran satisfies the VHA means test for qualifying for certain services, and the area of the country (SMSA) in which the veteran resides. The estimate of insured, billable workload is then converted to a dollar figure by incorporating a billing rate for each discharge (for the fraction of inpatient stays estimated to be for Medicare-insured veterans), each inpatient day (for the fraction of stays estimated to be for veterans with insurance other than Medicare), and each outpatient visit.[1]

CHQOER took into account VISNs' difficulties in collecting from certain types of insurers by estimating (county-by-county) the likelihood that an insured veteran belongs to an HMO. CHQOER also incorporated variation in VISNs' difficulty in collecting for some types of services by reducing calculated potential collections. For each bedsection, this adjustment averages actual past collection rates and a standard rate for collection set by the MCCR staff. Both the standard and the actual collection rates vary by bedsection (for inpatient services) and by whether inpatient or outpatient services are provided. For three bedsection classifications, those for which the 1997 collection experience was sufficiently broad to allow a reasonable estimate of collections rates at the VISN level, the adjusted collection rate varies by VISN. For other bedsections, the adjusted rate for each bedsection incorporates a national average across all VISNs of the 1997 collection experience for that bedsection.

[1] The part of the model that is estimates a given fiscal year's potential collection is described in Hendricks, Anderson and Cahill (1997). Projecting those estimates into the future is described in Hendricks, Anderson and Comstock (1997).

The following list summarizes the factors that are accounted for in the model:

- Level of workload
- Mix of workload (inpatient/outpatient, by bedsection and by type of insurance)
- Share of services provided for non-service connected conditions
- Share of patients with any insurance
- Share of insured patients who have billable insurance
- Billing rate per bedsection discharge or day or visit
- Collection rate per bedsection, both as future target and as past performance

CRITERIA FOR EVALULATING A VISNs' LEVEL OF POTENTIAL COLLECTIONS

To understand what produces high or low forecasts of potential collections, it is helpful to abstract from and simplify the operation of the model. For any station or VISN, potential collections (PC) that are generated by the MCCR/CHQOER model can be thought of as the following calculation multiplying five factors:

PC = % of workload that reflects non-service connected treatment x workload in 1998 (discharges, days or visits) x
% of patients estimated to have private insurance x
% of insured patients in general population not in HMO's x
$ bill rate per bed section discharge, inpatient day or outpatient visit x
target collection rate per bed section

Thus, potential collections for a station or VISN are directly related to the total workload of services provided by that VISN. The calculated potential collections are higher than average for those VISNs that provide more than the average total workload of service.

Using the equation above, we can consider variations in potential collections on three tiers:

1. The total amount of potential collections.

2. Relative contributions of workload and of the combined effect of all other factors
3. Relative contributions of each of these other factors..

We begin by looking at total estimated potential collections by VISN. Then, we scale this measure separately along two dimensions: "Amount Per Resident Veteran" and "Amount Per User of VHA." One would expect potential collections to be related directly to the number of users of the VISNs' medical services, and the number of users should be related to the number of veterans in the area served by the VISN.

In the next step we separate workload effects from the combined effect of all other factors. If a heavy volume of work raises potential collections for some VISNs, we would expect those VISNs to have higher than average rates of discharges, inpatient days, or outpatient visits when scaled by the number of users of the system or the number of resident veterans. If a VISN has an average volume of workload according to those measures, potential collections might still be high if the VISN has a high ratio of potential collections to one or more measures of workload: amounts per discharge, per inpatient day, and per outpatient visit. These last three ratios measure the combined importance of all factors in the model other than workload.

Finally, we examine how VISNs differ in their rates of insurance, in the mix of service-connectedness of conditions treated and in their rates of HMO penetration. We also examine the mix of services among different bedsections (treating outpatient services as a single "bedsection" distinct from all inpatient bedsections). Because the model allows billing rates and projected collection rates to vary by bedsection, differences in the mix of services by bedsection determine how important variations in the billing rate and in projected collection rates will be for producing differences in potential collections

We can now answer the second questions posed above:

By what criteria may a calculated potential collection amount be considered

"high"?

In the most general sense, the potential collection amount for any one VISN might be considered high if it has ratios of PC/user or PC/veteran that are appreciably higher than for most other VISNs. That is, after adjusting the potential collection amount by the most basic measures of the scale on which the VISN operates (potential collections per user or per veteran).

In another sense, the potential collection amount may be considered to be "high" if it exceeds what officials in the VISN believe to be the amount that is feasible to collect. If the model has accurate data about factors that should influence potential collections, and if the model correctly relates those factors to one another, the calculated amount of potential collections should be reasonable. But we must estimate the values for some of these contributing factors. If any of these estimated values substantially differs from the true value for the measure, the estimated potential collection amount is likely to differ from the true collectible amount.

The rest of this report presents and discusses briefly the data that answer the third question: How do VISNs compare on each of these factors incorporated in the model?

A NOTE ON PRESENTATION OF DATA

There is a great deal of data summarized in this report. To keep even the summary manageable, we use a combination of tables and graphs. The numbers underlying each graph are shown in tables in the Appendix.

We facilitate comparisons among the many measures by displaying the graphs in a common format. The measures are shown as percentage deviations of a VISN's value from the median value among the 22 VISNs on that measure.[2] The utility of this

[2] With 22 VISNs, the median on any measure is a simple average of the 11th and 12th ranking VISNs. The median equals a value for some VISN only when those two VISNs have equal values for the measure.

approach is evident from the equation presented above. Each component that contributes to determining potential collections enters as one term in a multiplication. Consequently, each component has the same effective weight in determining how a VISN's potential collections differ from the median potential collections. No matter which component one considers, a given percentage variation from that component's own median value makes the same percentage contribution to the VISN's variation from the median amount of potential collections.

This method of presenting the data can clarify the comparisons among VISNs. But simplifying the comparisons requires us to go beyond the direct calculations made in the model. For example, this report notes that the "proportion of insured veterans" differs from one VISN to another, and calculates the contribution those differences make toward the differences among VISNs in potential collections. In the actual computation of the model for potential collections, a number for "proportion of insured veterans" is never calculated for any VISN. Instead, many cells of data specific to each VISN are added together. Each cell shows the volume for one type of workload for a specific combination of veterans' age, type of insurance, geographic location, service-connectedness of treatment, bedsection of the treatment, and other factors. The combination of factors that identify the cell also determine the billing rate per unit and the probability of collection for services, which in turn allow us to convert the workload into a dollar amount of potential collections. Each cell has as one of its identifying characteristics its own figure for the proportion of insured veterans. We can calculate an average proportion for a VISN only by combining the proportions for all cells that apply to that VISN.

Any reference in this report to concepts like "proportion of insured veterans" in a VISN is possible only because we are looking inside the model and computing that proportion. For each measure discussed in the report, we have selected a form that we expect will be reasonable, understandable and useful. We recognize that alternative calculations are possible on some of these measures. In a Technical Supplement to this report, available from the authors on request, we describe in detail how we have

calculated each measure discussed in this report. In an Appendix that accompanies this report, we include tables that show the data underlying each chart. In addition, because the charts alone cannot show it, we explain in the Appendix the units in which the data underlying each individual chart are expressed.

TOTAL AMOUNT OF POTENTIAL COLLECTIONS.

VISN 16 stands out with by far the largest potential collection figure, almost $58 million, or 9% of the system total. (Table 1) The next highest VISN accounts for 7.3 percent of the total or $47.3 million. Only three other VISNs have amounts over $39 million. VISN 14 has the lowest amount at $12 million, with two other VISNs at $15 million or less. Except for the very high value for VISN 16, the VISNs are distributed fairly symmetrically about the median value for all VISNs ($28.3 million), with 7 VISNs more than 20 percent above the median and 7 others more than 20 percent below the median. (Chart 1)

Scaled by veteran population and number of users. VISNs 6, 7, 9, 16 and 17 have higher than typical PC per resident veteran:[3] more than $30 compared to a median of about $26.62. (Chart 2) Four of the five VISNs exceed the median by more than 20 percent. VISNs 21 and 22 are exceptionally low on this measure, with amounts below $15 per veteran. Only VISN 5 also has an amount per veteran less than $20. These 3 VISNs and 2 (4 and 11) others fall more than 20 percent below the median on this measure.

Of the five VISNs with very high PC per veteran, only VISNs 6 and 7 also have higher than typical ratios of PC per user of the VHA medical system.[4] (Chart 3) VISN 6 has by far the highest ratio of PC per user, nearly 40 percent above the median. Only two

[3] The number of resident veterans is taken from a file at Austin showing estimated veteran population by VISN.
[4] The figures for users of the system are taken from the KLF menu and represent distinct SSN's with any inpatient or outpatient service from facilities within the VISN during FY97. Figures for FY98 were not available when these data were originally compiled, though such figures are available as this report is being completed. In this count of users, a veteran with multiple inpatient stays counts the same as a veteran with a single outpatient visit for the year.

other VISNs (3 and 12) are more than 20 percent above the median. VISNs 21 and 22 are substantially below the median on this measure, as they were for PC per veteran. But VISN 22 is in a class by itself, while VISN 21 is not very different from VISNs 2 and 18.

VISNs that have very different ranks on PC per resident and PC per veteran have unusual patterns of breadth of utilization, as shown by their ratios of system users per resident veteran. (Chart 4). For example, VISN 16 ranks 2nd in PC per veteran, about 25% above the median. But for PC per user, it ranks 11th, helping to define the median. That switch in ranks occurs because VISN 16 has broad system utilization, that is, VISN 16 has a high rate of users per veteran, nearly 30% above the median. The reverse situation applies to VISN 11. In terms of potential collections per veteran, it ranks 18th, more than 20% below the median. For potential collections per user, it ranks 5th, about 15% above the median. This switch occurs because VISN 11 has the narrowest breadth of utilization, with users per veteran more than 30% below the median.

Whether scaled by veterans or users of the system, some VISNs rank similarly. VISNs 6, 7 and 17 are consistently high. VISNs 2, 4, 5, 20, 21 and 22 are consistently low.

WORKLOAD AND OTHER FACTORS

Volume of Workload. In the MCCR/CHQOER model, workload that generates potential collections is measured as inpatient discharges, days of inpatient stays, and outpatient visits. Some inpatient services are counted in terms of discharges to reflect inpatient stays for which the veteran has Medicare and, presumably, some form of Medigap insurance. Because MCCR does not recover costs that would paid by Medicare, for these stays, the potentially recoverable amounts approximate the Medicare deductible, a fixed amount per stay, the same regardless of the bedsection in which services are provided. Because we do not know which specific stays are Medigap-insured, the count

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But a single veteran may be contribute to counts for more than one VISN, if the veteran received services at any time during the year from facilities located in different VISNs.

is determined as a percentage of all inpatient discharges. The percentage varies by age of the veteran receiving the service. Veterans with insurance other than Medigap are assumed to have policies that pay benefits in proportion to the number of days in the hospital, so that the potentially recoverable amount varies approximately in proportion to the length of the stay. The daily cost MCCR seeks to recover varies among bedsection. For planning purposes, at least prior to FY99, MCCR has assumed that all outpatient visits are the same and each generates the same amount of potential collection: $229. Within each age group, the same fraction of outpatient visits as of inpatient discharges is assumed to be Medicare-insured (Medigap). While this assignment does not affect the amount of potential collections directly, it affects potential collections indirectly, because standard collection rates are different for Medicare (Medigap)-insured and other insured bills.

As with potential collectors, we scale these workload measures to express them as counts of discharges, days, and visits per user of the system. No single VISN ranks high on all three measures. But VISN 16 is consistently low, at least 10% below the median on all three measures. In contrast, VISN 12 is high on discharges (Chart 5) and outpatient visits (Chart 7) per user, and it ranks above the median on inpatient days per user (Chart 6). VISN 6 is high on discharges and inpatient days. VISN's 1 and 3 are very high on days per user and visit per user. VISNs 18, 21 and 22 are low on both discharges and inpatient days. VISNs 21 and 22 are especially low on discharges. VISNs 1, 2, 3, 5, 12, 13, 21 and 22 are at least 10% above the median for outpatient visits. VISN 1 has the highest rate of outpatient visits per user.

VISNs also differ in the mix of workload. Some VISNs that are very low on one or both inpatient measures are very high on outpatient measures. These VISNs also had very low ratios of potential collections per user. VISNs 21 and 22 are the clearest examples: lowest on discharges per user, well below median on inpatient days per user, and among the 6 highest on outpatient visits per user. This patterns suggests that the potential collections per user may be low for these VISNs because their services include an exceptionally large share of outpatient visits. The average potential recovery amount

is much less for an outpatient visit than for a discharge, and it is less than the average for inpatient days for even the least costly bedsection. In the last section of the report, we return to the question of the effect of the mix of services on potential collections.

Besides their level, the general variability of these measures also has important implications. The variation in inpatient days is substantially greater (as a percentage of the median) than for either discharges or outpatient visits. Twelve VISNs vary from the median by more than 25% for inpatient days. Three of them vary by about 50% or more. No VISN varies more than 30% on discharges per user, only 3 by more than 20%. And only one VISN varies by more than 20% for outpatient visits. This means that inpatient days per user is the most important measure of workload in affecting how much potential collections deviate from the median.

Other factors. Potential collection amounts per unit of workload show the combined effects of all factors other than the breadth and intensity of utilization on the estimate of potential collections. Only VISNs 16 and 19 are even moderately high on both inpatient measures (Charts 8 and 9). VISN 6 is very high for potential collections per discharge and per outpatient visit (Chart 10). VISNs 2, 5 and 22 are very low on both inpatient measures, and VISN 21 is moderately low on both. Those four VISNs are also the lowest for potential collections per outpatient visit. VISN 1 is 30% below the median for inpatient days, just under 10% below the median for discharges, and about 5% below for outpatient visits.

VISNs 13, 18 and 20 differ significantly in their ranks on these inpatient measures: they rank 1st, 5th and 4th for potential collections per inpatient day, but 12th, 21st and 17th for potential collections per discharge. This difference in ranks occurs, at least in part, because they rank 21st, 22nd and 20th, respectively, in average length of inpatient stay (days per discharge, not shown).

VISN 3 exhibits a similar difference in rank on the two inpatient measures, but in the opposite direction. It ranks 19th for potential collections per inpatient day, 3rd for

potential collections per discharge. The reason for this wide swing is that VISN 3 has, by far, the highest average length of inpatient stay. Its average of 20.6 days per discharge is the highest of all VISNs by the extraordinary amount of 4.5 days per discharge.

OTHER FACTORS CONSIDERED SEPARATELY

These other factors are overall insured rates for veterans, share of services provided to veterans with billable insurance (non-HMO plans), past collection experience, standards for future collections, and the mix between inpatient and outpatient services.[5] The most important factors for producing variations in potential collections are the rates of non-HMO insurance and the mix between inpatient and outpatient services.[6]

Rates of insurance among veterans. In the MCCR/CHQOER model, differences among VISNs in overall rates of insurance are the result of differences in age distribution, the service connectedness of conditions treated for veterans who receive services, and geographic variations in healthcare coverage in the general population. Because the service data do not show which specific veterans are insured, estimates of insurance rates are drawn from the 1992 Surveys of Veterans, with distinct rates for groups defined by age and service-connectedness of the condition treated. For veterans age 65 and over, the national rates of insurance according to the surveys are 38.45%, 22.10%, and 46.79%, respectively, for Category A service-connected veterans with non-service connected conditions, Category A non-service connected veterans, and veterans in Category C. For veterans under age 65, the respective insured rates are 32.35%, 18.70%, and 53.91%. Insurance rates are not estimated for Category A veterans who are

[5] Averages for each VISN for one of these measures are weighted means of the value for the measure in each of the subgroups in which data are organized. A description of the weighting and how it differs among these measures is available from the author in a Technical Supplement to this report.

[6] Another contributing factor is the set of assumptions the model makes regarding the distribution of insurance between Medicare (Medigap) and other types of insurance. This issue proves to be a difficult one for which to estimate an impact. The assumptions are fundamental to the determination of workload that generates potential collections. But it is hard to create an alternative state to that which is embedded in the model; it is hard to devise two matching sets of outcomes which provide an accurate contrast between "adjusting for the distribution of insurance" and not adjusting for it. So we do not attempt to provide estimates of the impact of the distribution of insurance. Strictly speaking, all of our conclusions should be qualified as "conditional on the distribution of insurance".

service-connected and are treated for service-connected conditions or for all others not previously defined in this paragraph, because MCCR does not bill insurers for these services. Chart 11 shows the effect of the adjustment. These insured rates from the Survey of Veterans are then refined by recognizing that insurance coverage is more extensive in some areas of the country than in others. The model assumes that veterans show the same area-by-area differences in insurance coverage as in the general population, and a second stage adjustment is made. Chart 12 shows the effect of geographic refinements alone.

Based on the figures from the surveys and the distribution of service-connectedness, the differences among VISNs in overall insured rates are not very important factors in producing differences among VISNs in potential collections. The differences are generally less than 10% of the median insured rate. The relative unimportance of this measure is not surprising, given that the only sources of difference are differences among VISNs in the age distribution and service-connections of conditions treated. Only VISN 3 is more than 5% above the median, and only VISNs 5, 7, 13 and 17 are more than 5% below the median. No VISN differs from the median insured rate by more than 10%. The limited range of these differences merely reflects the limited variation in estimated rates of insured veterans: between 19.3% and 22.7% (where non-billable service-connectedness is treated as a zero insurance rate).

For most VISNs, geographic refinements also are only minor contributors to producing differences among VISNs in potential collections. The largest effects are for VISNs 7, 8, 16, 17, 18, 21 and 22, for which the insurance rates from the Survey data are adjusted downward by between 5% and 10%. No VISN has its rate adjusted upward by more than about 3%.

For most VISNs, these two factors together have a small effect on how their potential collections differ from other VISNs. The insurance adjustment and the geographic refinements act in opposite directions. For example, VISN 13 has the lowest overall insured rate, based on Survey data and service-connectedness of conditions. But

the area adjustments bring VISN 13 back toward the median by increasing the estimated insurance rate about 3% higher than for the median adjustment.

For several VISNs, however, these individually small effects reinforce each other. The only case for which the combined effects are large enough to be reinforced is VISN 17. Its insured rate based on Survey data is 9% below the median. The geographic adjustment pushes it another 10% below the median for all VISNs.

Rates of HMO penetration. After determining the proportion of services likely to be insured, potential collections are reduced by recognizing that recovering costs may be much more difficult from HMO's than from other insurers. To reflect this difficulty, estimated insured rates are reduced in proportion to HMO penetration among the general insured population in the VISN. This penetration rate is estimated by averaging rates of HMO penetration in the SMSA's in which users of the VISN's services reside, with the each SMSA's rate weighted in proportion to the share of the VISN's patients that reside in that SMSA. This adjustment assumes that veterans with insurance participate in HMO plans to the same extent as non-veterans.

This measure produces about twice as much variation among VISNs as do the general insurance rates (Chart 13). To maintain comparability with earlier graphs, Chart 13 actually shows 1 minus the HMO penetration rate for the VISN (the non-HMO rate among all insureds), since that is the proportion that remains to contribute to potential collections after this adjustment is applied. Using 1 minus the penetration rate means that values above the median on this measure are associated with higher than average potential collections, as in earlier graphs. Keep in mind that this adjustment reduces potential collections for all VISNs. For a VISN to rank above the median on this measure means that its potential collections are reduced less than for most VISNs.

Five VISNs are at least 10% above the median, and an equal number are at least as far below the median. VISNs 6, 7, 14, 16 and 17 are more than 10% above the median, signaling low levels of HMO penetration. VISNs 2, 21 and 22, where HMOs account for

large shares of the market, are more than 20% below the median. VISNs 1 and 5 are more than 10% below the median. In general, this adjustment reduces potential collections most for VISNs in the Northeast and the West Coast (Regions 1 and 4), least for VISNs in Regions 2 and 3.

Collection rates. The application of collection rates to the potential collection amounts acknowledges that not everything deemed to be recoverable in principle is recoverable in fact. In part, this adjustment is designed to reflect the well-recognized pattern that even in the general health-care system, insurers often do not pay the full amount of charges billed to them. A rate typically cited for payment by private insurers is 80% of charges. For charges billed to patients insured by Medicare (who are presumed to have some form of Medigap insurance), the supplemental insurance pays at most the insured veteran's copayment, about 20% of charges. In part, this adjustment attempts to reflect the reality that some insurers will simply refuse to reimburse the VHA for providing services that they (the insurers) argue the VHA is obligated to provide even if the veteran had no insurance. Collection rates are particularly low for certain kinds of services, such as mental health or psychological support services, often because private insurance plans strictly limit the number of visits they will pay for.

Collection rates are specified for each bedsection, where all outpatient services are treated as a single bedsection. The collection rates are a simple average of MCCR's goal percentage collection rates for FY98 and the actual collection rates determined by the Rate Study. (Using only actual collection rates would have the same drawbacks noted above for using only past collection experience for setting future goals for collections.) For most bedsections, these collection rates are system-wide rates and are the same for all VISNs. The average collection rate for these bedsections differ among VISNs only because of differences in the mix of services by bedsection. These average collection rates are shown in Chart 14. It is clear that the range of variation in collection rates is small when compared with ranges we have seen for other measures.

For general medical and surgical bedsections for inpatient care and for all outpatient care, the collection rates used are different for each VISN. When we average a VISN's collection rate for these three bedsections, weighting by the share workload in each bedsection, the rates are generally about 40%, and their range of variation is quite limited. Except for VISN 3, the rate range from a minimum of 37% to a maximum of 43%. Except for VISN 3, these collection rates are not of major importance in determining variations among VISNs in potential collections. VISN 3's experience contrasts sharply with the other VISNs. It apparently has had very unfavorable past experience in trying to recover costs, and its services apparently are concentrated in bedsections for which recovery traditionally is very difficult. This is clearly an important contributing factor in setting VISN 3's potential collections.

Mix of services and average billing rates. For all VISNs for FY98, MCCR expects each discharge of a Medicare-insured person to generate a bill to recover $793 from a Medigap insurer. A single billing rate is also assumed for each outpatient visit regardless of insurer or VISN: $229. Billing rates are different for each inpatient bedsection, that is billed to a non-Medigap insurer, but all VISNs bill at the same rate for the same bedsection.

Given this equality, in billing rates, the mix of services contributes to differences in potential collections among VISNs in two ways:

1) For veterans with insurance other than Medicare, the cost of an inpatient day differs by bedsection. Differences among VISNs in the mix of inpatient days produce differences in estimated potential collections.

2) Billing rates differ among the 3 broad categories of services (Medigap-insured discharges, inpatient days billed to non-Medigap insurance, and outpatient visits). Differences in the mix among these broad categories produce differences in estimated potential collections.

Chart 16 shows differences associated with the mix of inpatient days among bedsections. This is a significant source of differences in potential collections, as 10 VISNs vary by nearly 10% or more from the median, and 5 of those vary by more than 15%.[7] Inpatient services for VISNs 3 and 11 have disproportionately high shares of their services in bedsections with relatively low cost per day: alcohol, drug or substance abuse, and psychological services. Inpatient services for VISNs 8, 13 and 18 are dominated by bedsections with high cost per day: general medical, surgical, neurological, epilepsy, medical intensive care unit, and surgical intensive care unit.

Adding Medicare-insured discharges, so that Chart 17 reflects the effect of the mix of all inpatient services, does not appreciably change the picture. Because the $793 rate billed for Medicare-insured discharges is fairly close to the median rate per inpatient day, the median drops slightly and the range of percentage variation by VISN from this reduced median is compressed slightly. Most VISNs have their variation from the median reduced by 2 to 3 percentage points. Only a pair of VISNs changes in relative rank (7 and 12), and the change is trivial.

Adding outpatient services to the mix changes the picture substantially. For example, VISNs 8, 13 and 18 have the highest mean bill rates for inpatient services (Chart 18). But, after accounting for outpatient services, VISN 18 has the lowest average bill rate per unit of service. VISN 18 must have by far the largest fraction of its services (by count) provided as outpatient visits. Similarly, VISNs 8 and 13 are below the median after adding outpatient services.

Chart 18 shows a measure of the net impact of differences in service mix on estimated potential collections. Looking just at Chart 18 suggests that variations in

[7] Charts 16 and 17 are not directly comparable with earlier charts because the variations shown in Charts 16 and 17 affect only a part of the calculated potential collections. Chart 16 applies to those potential collections derived from non-Medigap insured inpatient days of service: for the FY98 forecasts, between 5.1% and 10.5% of total potential collections, depending on the VISN. Chart 17 applies to potential collections derived from all inpatient services, between 44% and 63% of the total for FY98, depending on the VISN. To make these charts strictly comparable, one would have to scale the amounts shown by the share of potential collections from that source in each VISN. But that share is only computable from the complete forecast and relies on the mean bill rates embedded in the chart. So a strictly accurate scaling of this effect is very difficult to compute.

service mix may not be too important in determining differences among VISNs in potential collections. After all, only one VISN (6) differs by more than 10% from the median of the VISN average bill rates.

However, a different chart is needed to show the impact of differences in the mix of services between inpatient and outpatient. Chart 19 shows the difference made by taking account of the relative mix of inpatient and outpatient services, compared to the effect of taking account of the mix of inpatient services alone. In the layout for this chart, we have departed from the convention of ranking VISNs from lowest (top of chart) to highest (bottom of chart) on the measure depicted. Instead, to facilitate comparison with Chart 17, VISNs in Chart 19 are listed in the same sequence as on Chart 17. And the length of the bar for the VISN shows the amount by which its value, relative to the median, changes between Charts 17 and 18.

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Chart 19 shows clearly that the most common effect of adding outpatient services to the mix is to draw VISNs closer to the median. VISNs that had average inpatient bill rates above the median had their average bill rate reduced the most; those with average inpatient bill rates below the median had their average bill rates reduced the least.

This impact is a consequence of a pattern of service mix across VISNs. In VISNs that have the greatest relative share of outpatient services, inpatient services are concentrated more heavily than average in bedsections with relatively high cost per day. In VISNs with the highest relative share of inpatient services, hospitals are providing a disproportionately high share of these services in the lowest-cost (per day) bedsections (such as alcohol and substance abuse and psych services). The pattern can be stated more simply: those VISNs that provide a relatively low volume of lower-cost (per day) inpatient treatment also tend to service a relatively high volume of outpatient visits.

NOTE ON FY98 DATA

Figures for potential collections for FY98 used in this report are calculated by the authors using the MCCR/CHQOER methodology. Workload data used in those calculations are limited to the first quarter of FY98 (9/1/1997-12/31/1997). Those data were annualize to a full year basis by simply multiplying first quarter counts by four. Even though we have data for the full FY98 now as we prepare this report, we have used the figures based on annualized first quarter data because those are the figures that have previously been presented to, and discussed with, VISN CFO's. Those are the figures that VISN CFO's and MCCF staff should be familiar with seeing.

Table 2 compares the estimate of potential collections using only first quarter FY98 data with an estimate that uses the actual full year's data. Using only 1st-quarter (annualized) data underestimates total potential collections by 6.7 percent. The underestimate is especially large for VISNs 5 and 17, but using only first-quarter data underestimates potential collections for all VISNs. As a result, the relative rankings of VISNs by potential collections would not change very much if we used full-year FY98 data.

The data showing the number of users of the system posed a different problem. When we began the analysis for this report, we had only a count of users for FY97. First quarter FY98 data could not be annualized in the straightforward way that we could for workload data. Mutiplying first-quarter data by four would overestimate the annual number of users because it would double-, triple-, or even quadruple-count those people who would use the system during more than one quarter of the year. The approach we selected for this analysis was to employ the FY97 counts for users of the system. We recognized that this approach meant that, for example, when we combined FY98 potential collections with the FY97 count of users to compute "Collections Per User", the results necessarily would have some error because of the mismatch of the time covered by each series. Because the principal focus of this report was on the relative positions of the VISNs on these measures, not with the absolute amount of potential collections per user, we expected that any error from the mismatch of timing would be small. To wait

until we could compute the number of users from complete data for FY98 would have delayed this report by several weeks.

To give readers an idea of how the numbers in the report might have been different if we had waited until we had data for the full year of FY98, Table 3 shows the count of users that the authors derived from using all of the FY98 medical service data for inpatient and outpatient care.

The FY98 count is appreciably higher than the FY97 count, by just over 25 percent. This difference seems too large to be an accurate reflection of true growth in the number of distinct users of the system. We know that the FY98 count is the correct number for each VISN of the distinct users (unduplicated SSN's, scrambled to maintain patient confidentiality) receiving either inpatient or outpatient services in a VISN during FY98. Any person is counted only once in a VISN, but the same person may contribute to counts in more than one VISN. The FY97 count is taken from the KLF menu and is supposed to correspond to the same concept. However, we cannot verify the exact methodology used to determine the FY97 count.

As with the use of estimated FY98 potential collections based on first-quarter data only, the issues addressed with the count of users are focused more on differences among VISNs than on the absolute level of such measures as outpatient visits per user. Even if the count of FY97 users differs from the FY98 count, the analysis in the report would not change if the FY98 counts were used unless a VISN's relative share of the total count of users is different for FY98 than for FY97. If every VISN's FY98 count was 25.11 percent higher than its FY97 count, the analysis in the report would not change at all. Table 3 shows that each VISN's count differs somewhat from that 25.11 percent increase. To take the most extreme example, VISN 1's figure for discharges per user would be 16 percent lower (0.2043 discharges per user instead of 0.2370); VISN 3's figure would be 34 percent lower (0.1731 instead of 0.2319). VISN 3's figures would be 15 percent lower than VISN 1's if FY98 data were used, instead of being 2 percent lower when FY97 data are used. Other VISNs would show much smaller variations in their relative

values on these measures. More typical would be the change for VISNs 2 and 3. VISN 3 would change from being about 12 percent higher than VISN 2 to being 15 percent higher.

We judged to retain the figures based on the FY97 user counts. Most relationships among VISNs on any measure employing user counts would not change substantially if FY98 data were used.

Table 1.
Veterans, Users and Potential Collections
Total and As % of Total For VHA System
Fiscal Year 1998, 1st Quarter Annualized

VISN	Resident Veterans FY98	Users of VHA FY97	Potential Collections FY98 ($)	VISN Share of Total Veterans	Users	Potential Collections
1	1,327,372	133,352	34,470,942	5.3%	5.0%	5.3%
2	597,510	74,114	13,064,138	2.4%	2.8%	2.0%
3	1,376,495	131,337	39,250,873	5.5%	4.9%	6.1%
4	1,644,322	150,595	33,765,992	6.5%	5.6%	5.2%
5	809,928	75,737	15,178,960	3.2%	2.8%	2.4%
6	1,182,258	128,279	43,247,345	4.7%	4.8%	6.7%
7	1,329,800	149,667	42,538,165	5.3%	5.6%	6.6%
8	1,737,524	217,193	47,263,982	6.9%	8.1%	7.3%
9	1,005,244	134,796	32,196,952	4.0%	5.0%	5.0%
10	1,060,188	97,601	23,920,487	4.2%	3.6%	3.7%
11	1,515,085	113,282	31,351,941	6.0%	4.2%	4.9%
12	1,234,511	120,590	36,169,430	4.9%	4.5%	5.6%
13	647,067	69,486	17,228,825	2.6%	2.6%	2.7%
14	467,565	51,022	12,386,479	1.9%	1.9%	1.9%
15	975,396	112,952	26,906,561	3.9%	4.2%	4.2%
16	1,743,068	240,207	57,994,541	6.9%	8.9%	9.0%
17	951,787	116,820	29,681,129	3.8%	4.3%	4.6%
18	798,685	126,766	22,762,684	3.2%	4.7%	3.5%
19	659,162	72,693	17,534,137	2.6%	2.7%	2.7%
20	1,129,799	111,359	25,422,123	4.5%	4.1%	3.9%
21	1,306,019	112,473	19,382,830	5.2%	4.2%	3.0%
22	1,691,570	149,985	23,797,966	6.7%	5.6%	3.7%
Total	25,190,355	2,690,306	$645,516,483			

Source: Veterans: Austin population file
Users: Unique SSN's receiving service, from KLF Menu
Potential Collections: CHQOER model data

Table 2
Potential Collections FY98
Estimates Based on 1st Quarter
And on Full Year Workload Data

VISN	1st Quarter Annualized	Full Year	Underestimate Using 1st Quarter (Percent of Full Year)
1	34470941.99	36179497.65	-4.7
2	13064138.41	13363121.98	-2.2
3	39250872.57	42243854.71	-7.1
4	33765991.73	36872007.47	-8.4
5	15178959.86	17067916.13	-11.1
6	43247345.42	44937754.56	-3.8
7	42538165.27	46789020.83	-9.1
8	47263982.13	50316340.28	-6.1
9	32196952.09	35605180.68	-9.6
10	23920486.87	24028119.17	-0.4
11	31351941.19	34373664.42	-8.8
12	36169430.43	37334741.23	-3.1
13	17228824.82	17941299.68	-4.0
14	12386479.17	13084636.79	-5.3
15	26906560.70	29029061.49	-7.3
16	57994541.03	62724823.76	-7.5
17	29681129.06	34104774.08	-13.0
18	22762684.11	24237577.24	-6.1
19	17534137.10	18794450.49	-6.7
20	25422122.95	26882501.41	-5.4
21	19382829.58	20474986.74	-5.3
22	23797966.33	25179346.07	-5.5
Total	645516482.81	691564676.89	-6.7

Table 3
Users of VHA System
FY97 and FY98

VISN	Users FY98	Users FY97	Difference (Percent of FY97)
1	154,938	133,352	16.19
2	96,449	74,114	30.14
3	177,189	131,337	34.91
4	185,688	150,595	23.30
5	89,136	75,737	17.69
6	165,549	128,279	29.05
7	184,293	149,667	23.14
8	265,637	217,193	22.30
9	167,110	134,796	23.97
10	122,524	97,601	25.54
11	140,940	113,282	24.42
12	156,476	120,590	29.76
13	90,866	69,486	30.77
14	62,358	51,022	22.22
15	135,754	112,952	20.19
16	287,333	240,207	19.62
17	150,351	116,820	28.70
18	167,053	126,766	31.78
19	90,837	72,693	24.96
20	138,347	111,359	24.24
21	150,503	112,473	33.81
22	186,533	149,985	24.37
Total	3,365,864	2,690,306	25.11

Source: FY97 - KLF Menu. FY98 - Computed by the authors from the outpatient visits file and inpatient PTF, census, observation and census observation files. The FY98 data are counts, by VISN, of unique (scrambled) SSN's in these files. A given SSN is counted only once in any VISN but may contribute to totals in more than one VISN. FY97 data are supposed to represent the same concept, but we could not verify the methodology used for deriving the figures.

SUMMARY

VISNs differ greatly in potential collections calculated by the MCCR/CHQOER model, even when potential collections are expressed per resident veteran or per user of the VHA system. For simple total potential collections, 14 VISNs differ by more than 20% from the median of all VISNs. VISN 16 is highest; VISN 14, lowest. These rankings are due in large to the workload of those VISNs. When scaled by resident veterans or users of the system, VISNs 3, 6, 7, 12, and 17 are consistently above the median; VISNs 2, 4, 5, 20, 21, and 22 are consistently low.

Four factors are the principal contributors to these differences:

1. Breadth of utilization (users per veteran)
2. Intensity of utilization (discharges, inpatient days or visits per user), especially inpatient days per user
3. Rate of non-HMO insurance in areas served by the VISN
4. Mix between inpatient and outpatient services

With only two VISNs as exceptions, differences among VISNs in collection rates and in the proportion of veterans with some insurance are not very important in generating differences in potential collections. The exceptions are VISN 17, for which the veterans insured rate is important, and VISN 3, for which collection rates are important (most likely because of the mix of inpatient services by bedsection).

APPENDIX

Weights Used in the Report

Charts 1-10. No weights are necessary.

Insured Rate For Veterans (Chart 11) and Area Adjustment For Insurance (Chart 12). Weights are workload counts, adjusted for the likelihood of the type of insurance. That is, the workload count for discharges is reduced to reflect the share of discharges likely to be Medicare (Medigap)-insured in each cell. The workload count for inpatient days is similarly reduced to reflect the share of days likely to be privately insured (other than Medigap). With this weighting, inpatient stays are not doubly weighted (once as a discharge, again as the days associated with the stay).

Non-HMO Insured Rate (Chart 13). Weights are workload counts, adjusted for the likelihood of the type of insurance and for the likelihood of any insurance.

Blended Collection Rates (Chart 14) and Collection Rates for Bedsections With VISN-Specific Collection Rates (Chart 15). Weights are workload counts, adjusted for the likelihood of any insurance, the type of insurance, and HMO-participation.

All “Bill Rate” charts (Charts 15-19). Weights are workload counts, adjusted for the type of insurance.

UNITS USED IN CALCULATING CERTAIN CHARTS

Closely related to the weighting issue is the issue of which units measures are used to make computations for certain charts. The count of Resident Veterans in any chart is taken from veteran population files maintained at Austin and appear to apply to the fiscal year (FY98). The count of Users of the VHA System is an unduplicated count of unique identifiers (SSN's) who receive either inpatient or outpatient service (or both)

from the VHA System during FY97. (Full FY98 figures are available as this report is being written but were not available at the time the FY98 forecasts were computed.)

Discharges Per User (Chart 5) and Potential Inpatient Services Collections Per Discharge (Chart 8). The measure of discharges is the full workload count, not adjusted for type of insurance. This is clearly the correct measure for Chart 5, since both users and discharges apply to all services rendered by the VISN. The potential collections amount used in Chart 8 is limited to collections that the Model expects to be derived from all inpatient services, whether the veteran has Medicare/Medigap insurance or other private insurance. The measure of discharges in the denominator reflects all discharges for the VISN, not just the fraction of those that are assumed to be Medicare/Medigap-insured. (In the model, only the fraction of discharges that are assumed to be Medicare/Medigap-insured contributes to calculating potential collections. The fraction of discharges that is assumed not to be Medicare/Medigap-insured contribute to potential collections through the length of stay of the associated discharge.) This means that VISN differences in potential collections per discharge highlight the effects of VISN differences in age/means/service-connectedness/type of insurance mix and differences in bedsection mix of inpatient services (with bedsection-specific bill rates and collection rates).

INPATIENT DAYS PER USER (CHART 8) AND POTENTIAL INPATIENT SERVICES COLLECTIONS PER INPATIENT DAY (CHART 9)

Inpatient days are defined analogously to discharges. The "Inpatient Days" figure counts days from all stays, not just the fraction assumed to the Medicare/Medigap insured. As a result, collections per discharge and collections per inpatient day are scaling the same potential contribution dollars and should not be added together to determine the total amount of potential collections generated by inpatient services.

Outpatient Visits Per User (Chart 6) and Potential Outpatient Services Collections Per Outpatient Visit (Chart 10). Potential collection amounts are those derived from

outpatient services, in which the distribution between Medicare/Medigap –insured and other insured veterans will affect the calculated potential collection amount. The Outpatient Visits measure counts all outpatient visits, regardless of type of insurance that may apply.

APPENDIX TABLE 1.

Veterans, Users and Potential Collections
Total and As % of Total For VHA System
Fiscal Year 1998, 1st Quarter Annualized

VISN	Resident Veterans FY(?)98	Users of VHA FY97	Potential Collections FY98 ($)	VISN Share of Total Potential Veterans	Users	Collections
1	1,327,372	133,352	34,470,942	5.3%	5.0%	5.3%
2	597,510	74,114	13,064,138	2.4%	2.8%	2.0%
3	1,376,495	131,337	39,250,873	5.5%	4.9%	6.1%
4	1,644,322	150,595	33,765,992	6.5%	5.6%	5.2%
5	809,928	75,737	15,178,960	3.2%	2.8%	2.4%
6	1,182,258	128,279	43,247,345	4.7%	4.8%	6.7%
7	1,329,800	149,667	42,538,165	5.3%	5.6%	6.6%
8	1,737,524	217,193	47,263,982	6.9%	8.1%	7.3%
9	1,005,244	134,796	32,196,952	4.0%	5.0%	5.0%
10	1,060,188	97,601	23,920,487	4.2%	3.6%	3.7%
11	1,515,085	113,282	31,351,941	6.0%	4.2%	4.9%
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14	467,565	51,022	12,386,479	1.9%	1.9%	1.9%
15	975,396	112,952	26,906,561	3.9%	4.2%	4.2%
16	1,743,068	240,207	57,994,541	6.9%	8.9%	9.0%
17	951,787	116,820	29,681,129	3.8%	4.3%	4.6%
18	798,685	126,766	22,762,684	3.2%	4.7%	3.5%
19	659,162	72,693	17,534,137	2.6%	2.7%	2.7%
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21	1,306,019	112,473	19,382,830	5.2%	4.2%	3.0%
22	1,691,570	149,985	23,797,966	6.7%	5.6%	3.7%
Total	25,190,355	2,690,306	$645,516,483			

Source: Veterans: Austin population file
Users: Unique SSN's receiving service, from KLF Menu
Potential Collections: CHQOER model data
(from summ_2)

APPENDIX TABLE 2. Supporting Charts 2 and 3

Potential Collections Per Veteran and Per User, FY98

VISN	Potential Collections ($) Per Veteran	Per User
1	25.97	258.50
2	21.86	176.27
3	28.52	298.86
4	20.53	224.22
5	18.74	200.42
6	36.58	337.14
7	31.99	284.22
8	27.20	217.61
9	32.03	238.86
10	22.56	245.08
11	20.69	276.76
12	29.30	299.94
13	26.63	247.95
14	26.49	242.77
15	27.59	238.21
16	33.27	241.44
17	31.18	254.08
18	28.50	179.56
19	26.60	241.21
20	22.50	228.29
21	14.84	172.33
22	14.07	158.67

APPENDIX TABLE 3. Supporting Charts 3, 5, 6 and 7

Workload and Potential Collections Per User, FY98
(1st Quarter Annualized)

VISN	CDISPUSE	CDAYPUSE	CVISPUSE	GPERUSER
1	0.2370	3.476	14.71	258.50
2	0.2002	3.146	13.18	176.27
3	0.2319	4.773	13.56	298.86
4	0.1893	2.739	11.21	224.22
5	0.2323	3.220	12.68	200.42
6	0.2744	4.076	10.38	337.14
7	0.2128	3.427	10.68	284.22
8	0.2025	2.053	12.04	217.61
9	0.2581	2.828	10.20	238.86
10	0.2259	2.606	11.68	245.08
11	0.2396	3.616	11.09	276.76
12	0.2950	3.367	13.64	299.94
13	0.2415	1.876	12.87	247.95
14	0.2359	2.176	11.36	242.77
15	0.2268	2.116	11.23	238.21
16	0.2066	2.213	10.02	241.44
17	0.2212	3.448	11.30	254.08
18	0.2000	1.399	11.34	179.56
19	0.2167	2.154	10.60	241.21
20	0.2279	1.818	11.37	228.29
21	0.1833	1.838	13.12	172.33
22	0.1766	1.832	13.23	158.67

APPENDIX TABLE 4. Supporting Charts 8, 9 and 10

Potential Collections Per Discharge, Day and Visit, FY98
(1st Quarter Annualized)

VISN	CXGPDIS	CXGPDAY	CXGPVIS
1	495.26	33.78	9.59
2	434.07	27.62	6.78
3	758.58	36.86	9.07
4	582.87	40.27	10.16
5	434.84	31.37	7.84
6	774.44	52.12	12.01
7	797.61	49.52	10.72
8	526.98	51.97	9.21
9	534.68	48.80	9.89
10	557.71	48.34	10.20
11	594.51	39.40	12.10
12	542.44	47.53	10.25
13	530.14	68.26	9.32
14	529.65	57.43	10.37
15	526.38	56.40	10.59
16	655.12	61.15	10.59
17	670.21	42.99	9.36
18	409.35	58.50	8.62
19	612.74	61.65	10.23
20	486.87	61.03	10.31
21	430.98	42.97	7.12
22	396.72	38.23	6.70

APPENDIX TABLE 5. Supporting Chart 11

Insured Rate For Veterans Adjusted for Service Connectedness Of Veteran and Condition Treated
Estimated for FY98

VISN	Rate of Insurance Among Veterans	Difference From Median Insured Rate
1	0.217	1.88%
2	0.212	-0.47%
3	0.227	6.57%
4	0.217	1.88%
5	0.198	-7.04%
6	0.208	-2.35%
7	0.197	-7.51%
8	0.217	1.88%
9	0.204	-4.23%
10	0.208	-2.35%
11	0.217	1.88%
12	0.215	0.94%
13	0.193	-9.39%
14	0.212	-0.47%
15	0.209	-1.88%
16	0.212	-0.47%
17	0.194	-8.92%
18	0.220	3.29%
19	0.218	2.35%
20	0.214	0.47%
21	0.216	1.41%
22	0.214	0.47%
Median	0.213	

APPENDIX TABLE 6. Supporting Chart 12

Area Adjustments For Insurance Rate

VISN	Mean Area Adjustment Factor	Difference From Median Adjustment Rate
1	1.043	1.07%
2	1.013	-1.84%
3	1.019	-1.26%
4	1.056	2.33%
5	1.031	-0.10%
6	1.034	0.19%
7	0.971	-5.91%
8	0.975	-5.52%
9	1.018	-1.36%
10	1.040	0.78%
11	1.064	3.10%
12	1.039	0.68%
13	1.064	3.10%
14	1.050	1.74%
15	1.045	1.26%
16	0.938	-9.11%
17	0.922	-10.66%
18	0.960	-6.98%
19	1.033	0.10%
20	1.046	1.36%
21	0.980	-5.04%
22	0.950	-7.95%
Median	1.032	

APPENDIX TABLE 7. Supporting Chart 13

Percentage of People with Health Insurance
Who Are Not Participants in HMO's
Estimated For FY98

	Estimated Rate of HMO Participation (Among People With Health Insurance)	Estimated Rate of Non-Participation in HMO's (Among People With Health Insurance) (1.0 – HMO Participation Rate)	Difference from Median Rate of Insured People Not Participating in HMO's
1	0.32	0.68	-11.11%
2	0.46	0.54	-29.41%
3	0.27	0.73	-4.58%
4	0.26	0.74	-3.27%
5	0.36	0.64	-16.34%
6	0.10	0.90	17.65%
7	0.09	0.91	18.95%
8	0.25	0.75	-1.96%
9	0.20	0.80	4.58%
10	0.23	0.77	0.65%
11	0.19	0.81	5.88%
12	0.24	0.76	-0.65%
13	0.20	0.80	4.58%
14	0.14	0.86	12.42%
15	0.17	0.83	8.50%
16	0.12	0.88	15.03%
17	0.15	0.85	11.11%
18	0.28	0.72	-5.88%
19	0.23	0.77	0.65%
20	0.30	0.70	-8.50%
21	0.44	0.56	-26.80%
22	0.47	0.53	-30.72%
Median	0.235	0.765	

APPENDIX TABLE 8. Supporting Chart 14.

Average Blended Collection Rates*, FY98
For Bedsections Using System-Wide
Collection Rates

VISN	Average Blended Collection Rates (Percent)	Difference from Median Blended Collection Rate
1	0.28	-6.67%
2	0.28	-6.67%
3	0.31	3.33%
4	0.30	0.00%
5	0.31	3.33%
6	0.32	6.67%
7	0.31	3.33%
8	0.29	-3.33%
9	0.30	0.00%
10	0.30	0.00%
11	0.30	0.00%
12	0.30	0.00%
13	0.28	-6.67%
14	0.28	-6.67%
15	0.29	-3.33%
16	0.30	0.00%
17	0.31	3.33%
18	0.28	-6.67%
19	0.30	0.00%
20	0.31	3.33%
21	0.29	-3.33%
22	0.30	0.00%
Median	0.30	

* Collection rates in this table for each VISN and bedsection are a simple average of actual FY95 collection rates (from Kashner) and MCCR targeted collection rates within that bedsection for all VISNs for FY98. The estimated collection rate for a given bedsection is the same for all VISNs. The average shown in the table is a weighted average for the VISN across all bedsections (except general medical, surgical, and outpatient services, which are shown in Appendix Table 9). Weights are the volume of services (adjusted for age/insurance mix) that are provided for that bedsection in that VISN during 1st quarter of FY98 (annualized).

APPENDIX TABLE 9. Supporting Chart 15.

Average Collection Rates For Bedsections
With VISN-Specific Collection Rates*, FY98

VISN	Average Collection Rate	Difference from Median Collection Rate
1	0.43	8.86%
2	0.40	1.27%
3	0.32	-18.99%
4	0.39	-1.27%
5	0.37	-6.33%
6	0.42	6.33%
7	0.41	3.80%
8	0.38	-3.80%
9	0.40	1.27%
10	0.38	-3.80%
11	0.41	3.80%
12	0.39	-1.27%
13	0.40	1.27%
14	0.38	-3.80%
15	0.38	-3.80%
16	0.40	1.27%
17	0.41	3.80%
18	0.39	-1.27%
19	0.40	1.27%
20	0.41	3.80%
21	0.39	-1.27%
22	0.38	-3.80%
Median	0.395	

* The average collection rate in this table is a weighted average of collection rates for general medicine, surgery and outpatient services. The weights are the volume of services (adjusted for age/insurance mix) provided in each bedsection by that VISN in 1st quarter FY98 (annualized). The rate for each bedsection in a VISN is a simple average of the actual FY95 (Kashner) collection rates for that bedsection in that VISN and the MCCR FY98 target collection rate for that bedsection. The rates underlying Appendix Table 9 differ from those for Appendix Table 8 in that the FY95 rates for a given bedsection in Table 9 are VISN-specific, whereas those in Table 8 are the same for that bedsection for all VISNs.

APPENDIX TABLE 10. Supporting Chart 16

Average Bill Rate for Inpatient Days*
FY98, 1st Quarter Annualized

VISN	Average Bill Rate ($)	Difference From Median Average Bill Rate
1	830.11	-5.59%
2	860.95	-2.08%
3	732.72	-16.67%
4	796.66	-9.39%
5	799.83	-9.03%
6	858.44	-2.37%
7	882.33	0.35%
8	1031.46	17.31%
9	905.43	2.98%
10	822.52	-6.45%
11	750.03	-14.70%
12	884.55	0.60%
13	1058.68	20.41%
14	864.77	-1.65%
15	876.19	-0.35%
16	926.82	5.41%
17	851.30	-3.18%
18	1096.39	24.69%
19	921.17	4.77%
20	961.87	9.40%
21	958.05	8.96%
22	976.04	11.01%
Median	879.29	

*Weighted average of bedsection per day bill rates. Weights are counts of inpatient days of service in the bedsection.

APPENDIX TABLE 11. Supporting Chart 17.

Average Bill Rate Per Unit of Service, All Inpatient Services*
FY98, 1st Quarter Annualized

VISN	Average Bill Rate ($)	Difference From Median of Average Bill Rate
1	826.01	-5.16%
2	853.25	-2.03%
3	735.29	-15.57%
4	795.51	-8.66%
5	798.38	-8.33%
6	852.69	-2.09%
7	875.47	0.52%
8	1003.03	15.17%
9	891.53	2.37%
10	819.27	-5.93%
11	752.33	-13.62%
12	875.38	0.51%
13	1014.72	16.51%
14	854.84	-1.85%
15	866.46	-0.51%
16	913.17	4.85%
17	846.25	-2.83%
18	1048.07	20.34%
19	907.71	4.22%
20	941.85	8.14%
21	940.78	8.02%
22	960.87	10.33%
Median	870.92	

*Weighted average of bedsection per day and discharge bill rates. Weights are counts of inpatient days of service in the bedsection or discharges from the bedsection.

APPENDIX TABLE 12. Supporting Chart 18

Average Bill Rate Per Unit of Service*, All Services
FY98, 1st Quarter Annualized

VISN	Average Bill Rate ($)	Difference From Median of Average Bill Rate
1	270.21	-6.25%
2	276.00	-4.25%
3	305.13	5.86%
4	283.40	-1.68%
5	288.82	0.20%
6	328.71	14.04%
7	312.98	8.59%
8	280.31	-2.75%
9	300.55	4.27%
10	288.35	0.04%
11	289.63	0.48%
12	297.98	3.38%
13	278.70	-3.31%
14	268.05	-7.00%
15	277.86	-3.60%
16	296.40	2.83%
17	312.92	8.56%
18	262.59	-8.90%
19	292.33	1.42%
20	288.12	-0.04%
21	271.68	-5.74%
22	276.47	-4.08%
Median	288.23	

*Weighted average of bedsection per day, discharge, and outpatient visit bill rates. Weights are counts of inpatient days of service in the bedsection, discharges from the bedsection, or outpatient visits, after adjustment for age, insurance, HMO penetration, but before adjusting for collection rates.